

Environmental Protection Agency

§ 1033.112

standards for the remainder of their service lives.

[73 FR 37197, June 30, 2008, as amended at 73 FR 59188, Oct. 8, 2008; 75 FR 22982, Apr. 30, 2010]

§ 1033.102 Transition to the standards of this part.

(a) Except as specified in §1033.150(a), the Tier 0 and Tier 1 standards of §1033.101 apply for new locomotives beginning January 1, 2010, except as specified in §1033.150(a). The Tier 0 and Tier 1 standards of 40 CFR part 92 apply for earlier model years.

(b) Except as specified in §1033.150(a), the Tier 2 standards of §1033.101 apply for new locomotives beginning January 1, 2013. The Tier 2 standards of 40 CFR part 92 apply for earlier model years.

(c) The Tier 3 and Tier 4 standards of §1033.101 apply for the model years specified in that section.

§ 1033.110 Emission diagnostics—general requirements.

The provisions of this section apply if you equip your locomotives with a diagnostic system that will detect significant malfunctions in their emission-control systems and you choose to base your emission-related maintenance instructions on such diagnostics. See §1033.420 for information about how to select and maintain diagnostic-equipped locomotives for in-use testing. Notify the owner/operator that the presence of this diagnostic system affects their maintenance obligations under §1033.815. Except as specified in §1033.112, this section does not apply for diagnostics that you do not include in your emission-related maintenance instructions. The provisions of this section address diagnostic systems based on malfunction-indicator lights (MILs). You may ask to use other indicators instead of MILs.

(a) The MIL must be readily visible to the operator. When the MIL goes on, it must display “Check Emission Controls” or a similar message that we approve. You may use sound in addition to the light signal.

(b) To ensure that owner/operators consider MIL illumination seriously, you may not illuminate it for malfunctions that would not otherwise require maintenance. This section does not

limit your ability to display other indicator lights or messages, as long as they are clearly distinguishable from MILs affecting the owner/operator’s maintenance obligations under §1033.815.

(c) Control when the MIL can go out. If the MIL goes on to show a malfunction, it must remain on during all later engine operation until servicing corrects the malfunction. If the engine is not serviced, but the malfunction does not recur during the next 24 hours, the MIL may stay off during later engine operation.

(d) Record and store in computer memory any diagnostic trouble codes showing a malfunction that should illuminate the MIL. The stored codes must identify the malfunctioning system or component as uniquely as possible. Make these codes available through the data link connector as described in paragraph (e) of this section. You may store codes for conditions that do not turn on the MIL. The system must store a separate code to show when the diagnostic system is disabled (from malfunction or tampering). Provide instructions to the owner/operator regarding how to interpret malfunction codes.

(e) Make data, access codes, and devices accessible. Make all required data accessible to us without any access codes or devices that only you can supply. Ensure that anyone servicing your locomotive can read and understand the diagnostic trouble codes stored in the onboard computer with generic tools and information.

(f) Follow standard references for formats, codes, and connections.

§ 1033.112 Emission diagnostics for SCR systems.

Engines equipped with SCR systems using separate reductant tanks must also meet the requirements of this section in addition to the requirements of §1033.110. This section does not apply for SCR systems using the engine’s fuel as the reductant.

(a) The diagnostic system must monitor reductant quality and tank levels and alert operators to the need to refill the reductant tank before it is empty, or to replace the reductant if it does